Notes on the Butterfly Genus *Ypthima*

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AND

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(*With a text figure*)

The object of these notes is to amplify the treatment of the genus by Talbot (1947) in the FAUNA OF BRITISH INDIA.

1. Talbot calls *Y. watsoni* Moore by the name of *Y. pandocus watsoni*, but the clasp of *pandocus* of Malaya and neighbouring areas is quite different from that of *watsoni*. Talbot describes at page 323 what is really the clasp of *watsoni*, similar to that of *newara*, in error for the clasp of *pandocus*. The foundation work on *Ypthima* genitalia is the article by Elwes and Edwards (1893). They figure *pandocus* correctly, but their figure of *watsoni* is actually that of the very different clasp of the more recently determined species *akbar* Talbot. Talbot points out their error on page 324. We give the correct figure below from our own dissections. The name, therefore, should be *Y. watsoni* Moore, a reversion to the old nomenclature.

2. A small series of what appears to be a variation of *Y. watsoni* was taken by Norman near Sebong (Manipur) in April and May, and in September. No other form of *watsoni* was found flying with them. The clasp is similar to that of *watsoni*. On the upper and under sides of the fore wing the discal fascia makes a loop with the submarginal fascia towards the dorsum. These loops are a feature of *watsoni*. The under side, however, has the ground grey, without the ochreous tinge seen in *watsoni*, and is densely covered with striae. The subapical ocellus underhind is in all specimens about the same size as that in space 3. Only in a very few specimens of *watsoni* is the subapical ocellus so small. The dry season form of *watsoni*, with dots for ocelli, has a peculiar mottled appearance unlike any other species. All dry season forms of *watsoni* have been taken from November till February save one in March. The wet season form of *watsoni* has been taken throughout the period April to October, so must have several broods. Until the form taken by Norman is captured in the dry season there remains the possibility that it has a dry season form similar to that of *watsoni*, and so be a mere variation of *watsoni*. The name given meanwhile is *Y. watsoni* var.

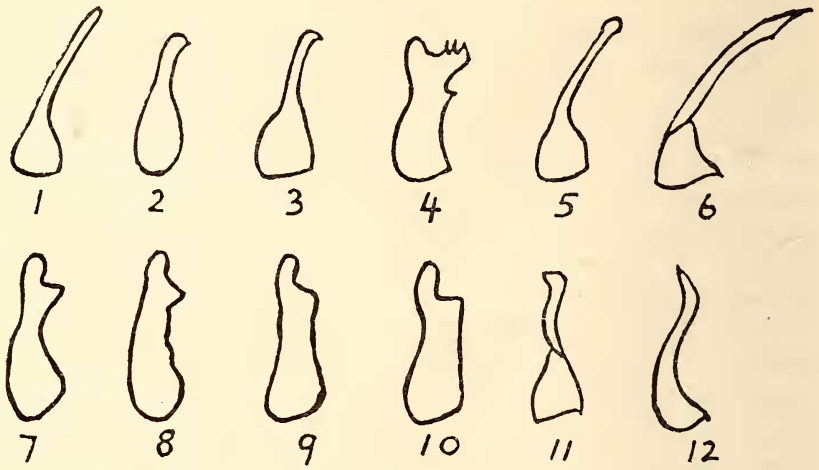
howarthi, in acknowledgement of the great help always given us by Mr. T. G. Howarth of the British Museum (Natural History). Examples have been lodged in the British Museum (Natural History) and further specimens have been set aside for the Zoological Survey of India.

3. *Y. akbar* Talbot. Cantlie found four males and three females from Shewymbin (Burma) among the part of Tytler's collection still lying in papers in the British Museum (Natural History). These all exhibit the previously unknown wet season form. Talbot's distinction that the discal line and ring of the ocellus upperfore nearly touch, whereas they are well separated in *watsoni*, is true on the average for wet season forms, although in some specimens of *watsoni* the discal line is quite as near the ocellus. The apical ocellus on the fore wing of *akbar* is very large in the dry season forms, but in these wet season ones it is not larger than that of *watsoni*. The discal line underhind in the wet season form is not more conspicuous than in *watsoni*, but is less angulated.

4. *Y. nareda nareda* Kollar and *Y. nareda newara* Moore is the nomenclature in Evans's IDENTIFICATION OF INDIAN BUTTERFLIES and it has been retained by Talbot. The clasp of *nareda* Kollar is figured by Elwes and Edwards and agrees with our dissections. It is short and stout, and the tip is shaped like a bird's head with the beak curved inwards towards the uncus. Talbot evidently describes it on page 321. But the clasp of *newara* narrows from the broad base into a slender rod which is longer than half the length of the whole. The tip varies in sharpness of point in different individuals. It is similar to that of *watsoni*: we give one figure below for both. It is not well figured by Elwes and Edwards as the clasp evidently became twisted on itself so that the tip curves the wrong way. In our opinion there is good reason to revert to the older classification used by Elwes and Edwards making these forms separate species, especially as they are distinguishable by the shape of the submarginal dark band underfore. The nomenclature should, therefore, be *Y. nareda* Kollar and *Y. newara newara* Moore.

5. *Y. newara sarcaposa* Fruhstorfer. Fruhstorfer (1908) wrote: 'As *sarcaposa* subsp. nov. the Burmese form is here separated, which is smaller and beneath lighter grey than large series of Sikkim and Assam examples. Ocelli with broader and lighter yellow bordering'. He took it in Tenasserim and says it goes north to Yunnan. The type in the British Museum has a white ground, especially on the underhind. The only other *sarcaposa* to be seen in the British Museum is a dry season form with dots for ocelli. No such insect is found in Sikkim and Assam, where all specimens of *Y. newara*

have the ground colour below ochreous. Specimens from N. Burma and Maymyo are similar to those from Sikkim and Assam. Their size is variable; small specimens occur in Sikkim and Assam as well



1. *watsoni* and *newara*. 2. *nareda*. 3. *burmana*. 4. *akbar*. 5. *fusca*. 6. *pandocus*. 7. *lisandra* (*avanta*). 8. *savara*. 9. *methora* and *atra*. 10. *dohertyi dohertyi*, *d. persimilis*, and *sakra*. 11. *asterope*. 12. *lycus*.

as larger ones, and the Burmese examples are not smaller than the small Assam ones. Evans (1932), therefore, was in error when, after saying that *nareda newara* occurs in Sikkim and Assam, he went on to say that *nareda sarcaposa* was similar to *nareda newara* but smaller and occurred in Assam and to the Shan States. Talbot follows Evans. Our opinion is that *newara newara* Moore occurs in Sikkim, Assam, and Burma and *newara sarcaposa* Fruhstorfer occurs in south Burma.

6. *Y. fusca* Elwes & Edwards. Elwes and Edwards dissected a specimen from Margherita (Assam) and found a clasp with a long slender rod like that of *newara*, but with an expanded tip. They figured it as no. 41, saying that owing to the difference in the clasp it might be a distinct species, in which case it would bear the name of *fusca*, but that they did not feel justified in separating a single specimen on an anatomical character alone. Norman has found this to be the commonest form of the *newara* group in Sibsagar District (Assam) although he has not taken it from the type locality (Margherita), where *newara newara* is the predominant form. Nor has he taken *newara* and *fusca* flying together, although it is probable that they do so from the evidence of Elwes and Edwards's type of the latter. The expansion at the tip of the clasp is like a flat serrated

cock's comb on the margin away from the uncus. It is visible when the clasp is held at an angle. In the type and in all specimens taken by Norman there is a whitish postmedian band underhind. Occasional specimens of *newara newara* have traces of a whitish area, but it is never so conspicuous as on *fusca*. The type specimen of Elwes and Edwards is in the British Museum (Natural History). Further specimens have been deposited there and others will be given to the Zoological Survey of India. (This species is not mentioned by Evans or Talbot.)

7. *Y. savara* Grose-Smith, *methora* Hewitson, *dohertyi dohertyi* Moore, and *dohertyi persimilis* Elwes and Edwards. The clasps of these are figured above. Our figures agree with those of Elwes and Edwards. *Methora* has serrations at the sloping rounded shoulder not shown in the figure. Elwes and Edwards figure only the clasp of *dohertyi dohertyi*, saying that the clasps of *persimilis* and of *sakra* are the same. The only material available to us for the clasp of *persimilis* is the clasp affixed to the card on the type specimen of *persimilis* as dissected by Elwes and Edwards, and their statement that it is the same in shape as that of *dohertyi dohertyi*. In addition to these known forms Norman took four males near Kangpokpi (Manipur, 4000 feet) in September, which we proceed to describe as a new species.

Ypthima atra sp. nov.

Male. Antenna brown, narrowly ringed with white at joints, club chestnut; head, thorax, and abdomen brown.

Upper side: Fore wing. Dark vandyke brown, without brand, outer margins evenly darker; length from centre of thorax to apex of wing 25 mm. A large bipupilled apical ocellus narrowly ringed with yellow. Hind wing. Colour as fore wing, but with a faint marginal yellow line which becomes clearer towards the tornus. Obscure subequal ocelli in spaces 6 and 5; a slightly larger prominent ocellus in space 3 contiguous to a still larger prominent ocellus in space 2; a less prominent small ocellus in space 1 contiguous tornally to a minute ocellus without pupil. (This minute ocellus is present in 3 out of our 4 specimens.) The ocelli in spaces 1, 2, and 3 have single pupils and are narrowly ringed with yellow. All ocelli on an area lighter than the rest of the wing.

Under side: Fore wing. Ground colour grey with no trace of ochreous; densely striated. Postdiscal and submarginal fasciae approaching each other towards the dorsum, the postdiscal fascia being confined to spaces 1b, 2, and base of 3. A very large bipupilled

subapical ocellus and a small ocellus with obsolescent pupil in space 2; both ocelli yellow-ringed.

Hind wing. Colour as fore wing. Prominent ocelli in 5 and 6 contiguous to each other, and prominent contiguous ocelli in 1, 2, and 3, all with yellow rings. The tornal group have their pupils in line, also the outer edges of their rings, so that the ocellus in 2, being the largest, projects inwardly. The other four ocelli are subequal, that in space 6 being slightly smaller than the rest. All ocelli single-pupilled except for that in 1c which is bipupilled, and may or may not touch the one in space 2.

Cilia: Brown.

Genitalia: The clasp is similar to that of *methora*, as shown in the accompanying illustration.

Specimens from the type series have been lodged in the British Museum (Natural History) and further specimens have been set aside for the Zoological Survey of India.

The description of the facies is applicable to the two type specimens of *persimilis* except that the colour of *atra* is darker above and the ground of the under side is grey. *Atra* would be a mere variation of *persimilis* if the clasp had the right-angled shoulder of *dohertyi dohertyi* and *dohertyi persimilis*, but to allow a constant variation in the clasp to this extent and call it a variation of *persimilis* would destroy the basis of classification by genitalia in this genus: we have no evidence that such a degree of variation exists in other species of the genus. We are well aware, however, that variation does occur in the genitalia of butterflies of the same species and are handicapped by not having a series of the very rare *persimilis* to dissect. *Methora* can be excluded because in *methora* there is a double ocellus (i.e. not a single bipupilled ocellus) in 1c underhind, which is in echelon with but not contiguous to the ocelli in 2 and 3. Also the subapical ocelli underhind are not contiguous to one another in *methora*. Apart from the two type specimens there are only four *persimilis* in the British Museum. Two are of the wet season form with large ocelli underhind, but one has the small ocelli of the dry season such as are seen in the dry season form of *methora*; these ocelli are at a distance from one another. The fourth has a very small double ocellus in 1c as is seen in *methora*: it is to be hoped that one day a dissection of this insect will show a clasp with a sloping shoulder so that it can be adjudged *methora*. If not, the main distinction between *persimilis* and *methora* would disappear and much confusion would ensue.

In the series of *dohertyi dohertyi* (in the British Museum) all ocelli underhind are large and contiguous with broad pale yellow

rings, but some papered specimens from Burma now found in the Tytler collection have small widely separated dry season form ocelli. It is strange that this form should have been unknown before.

8. The clasp of *Y. lycus* is figured. This species has been found by us only in Shillong. The striae below are so faint that a lens is required to see them adequately. A figure of the clasp of *Y. asterope* is also given since Elwes and Edwards's figure is unsatisfactory. The clasp twists over on itself, making a drawing difficult.

9. *Y. cantliei* Norman. This species was described from four males (Norman, 1958). A female was taken in the type locality on 7-5-58 and a male and female in Sibsagar District on 27-4-58. One each of the females will be given to the British Museum (Natural History) and the Zoological Survey of India, but they are so worn and tattered that we do not at present propose to describe one as an allotype.

References

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